

Field Report

USS Arizona Memorial

■ 1.0 Summary

The USS Arizona Memorial is located in Pearl harbor on the island of Oahu in Hawaii. The mission of the NPS at the USS Arizona Memorial is to honor and commemorate those who gave their lives during the attack on Pearl Harbor on December 7, 1941. In furtherance of this mission, the NPS strives to achieve three purposes: To preserve and interpret the tangible historical resources associated with the attack; to interpret the historical events which led up to and resulted from the attack; and to preserve and interpret the intangible historical values, including the memories, attitudes and traditions of individuals with first-hand knowledge of the attack. The memorial is reached by boats operated by the United States Navy from a Visitor Center located on shore. Visitation capacity is limited by the size of the memorial and the tour boat operation is managed to maintain visitor use at the appropriate level. The Visitor Center is served by several local bus routes, and tour bus operators bring many visitors to the site.

The site is adjacent to the USS Bowfin Submarine Museum. Visitors also may board shuttle buses to the USS Battleship Missouri Memorial at the USS Bowfin site.

Potential Alternative Transportation System (ATS) needs have been identified for this site as follows:

- The existing fleet of shuttle/tour boats will need to be replaced as when the useful life of the vessels is reached. The boats are approximately 10 years old. No land-based ATS options for access to the Memorial have been identified because of the existing public transit service and tour bus access. To meet the needs of the USS Arizona Memorial, a fleet of four replacement boats with capacity for 160 visitors and more than two wheelchairs will be needed in the future. Because the Navy presently uses the boats for other transportation purposes in Pearl Harbor, they maintain a larger fleet of vessels.

■ 2.0 Background Information

2.1 Location

The USS Arizona Memorial is located in Hawaii on the island of Oahu within the Pearl Harbor Naval Base (see Figure 1 for an overview of the island of Oahu and Figure 2 for the location of the Memorial).

Figure 1. Map of Oahu

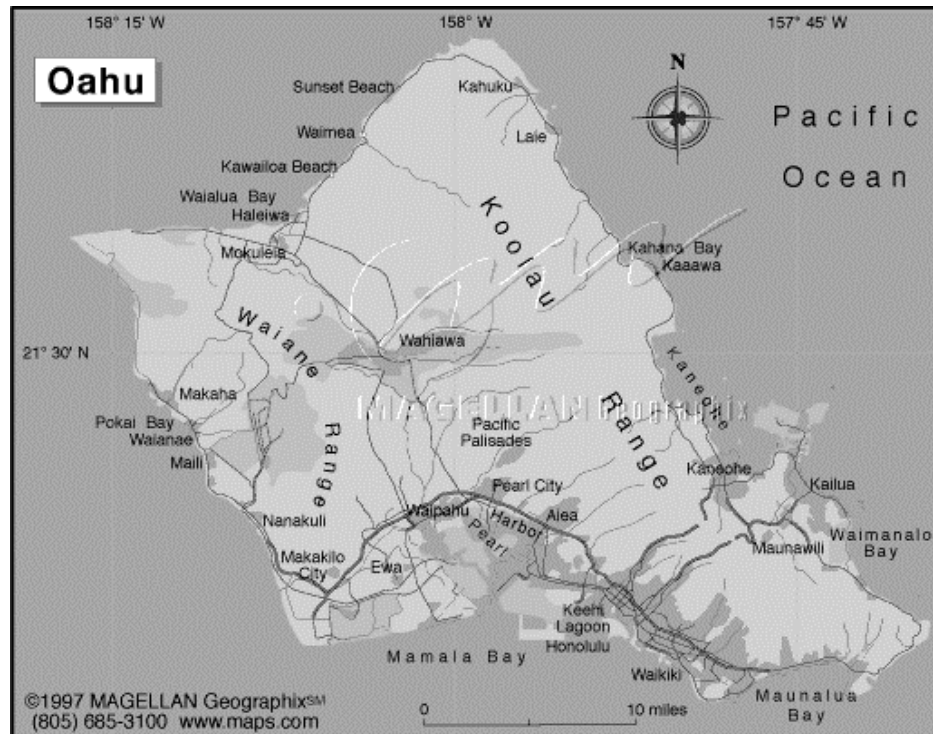
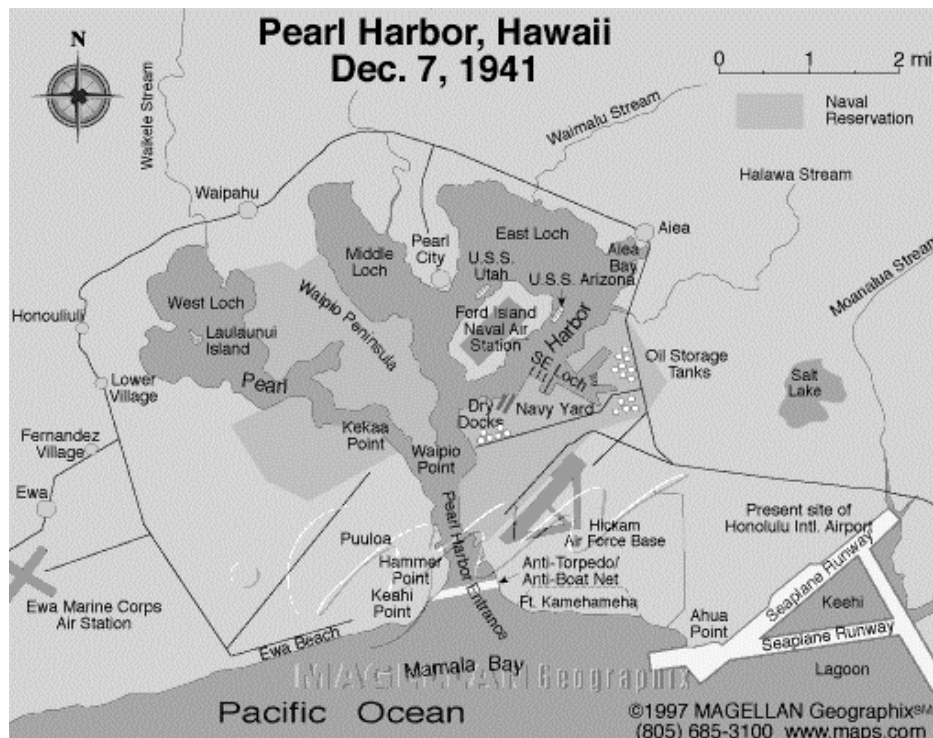


Figure 2. Location of USS Arizona Memorial



The USS Arizona Memorial is about a 20-minute drive from central Honolulu, and is located near the Honolulu International Airport. Access to the USS Battleship Missouri Memorial and the USS Bowfin Submarine Museum and Park, is located within walking distance.

2.2 Administration and Classification

The USS Arizona Memorial is operated by the NPS as a cooperative venture with the U.S. Navy, under general conditions outlined in the Military Construction Authorization Act of 1978. The Navy funded the construction of the Visitor Center facility, which was transferred to the NPS in 1980. At that time, the NPS assumed operational responsibility for the center. In 1964 the entire Pearl Harbor Naval Base was designated a national historic landmark by the Secretary of the Interior. The entire USS Arizona Memorial site, including the Visitor Center and the memorial itself, is within the boundaries of the landmark. The Battleship Missouri is currently managed by a non-profit organization, the Missouri Memorial Association, which has refurbished and will provide continued maintenance of the ship. The USS Bowfin Submarine Museum and Park is operated by the non-profit Pacific Fleet Submarine Memorial Association. Proceeds from admissions and gift shop sales at the Submarine site are used to continue the preservation and restoration of the USS Bowfin.

2.3 Physical Description

The USS Arizona Memorial site consists of several components. The first component, which is the primary feature of the site, is the sunken remains of the USS Arizona battleship located adjacent to Ford Island, in Pearl Harbor. The second component is the concrete memorial structure (see Figure 3), which spans the sunken battleship, and which is held in place by anchoring pilings embedded in the bottom of the harbor.

Figure 3. USS Arizona Memorial



The memorial, which is reached by boat, provides an opportunity to view the ship remains through an opening in the floor, as well as through large openings on either side of the memorial. It also provides an opportunity for reflection in a room containing a wall of engraved names of the men who were killed in the bombing attack on the USS Arizona.

A third component of the site is the Visitor Center, which is located on-shore within the Pearl Harbor Naval Base, three-quarters of a mile away from the memorial. The Visitor Center is the site for an interpretive film, provided by the NPS, which prepares visitors for the boat trip out to the memorial and the sunken battleship. The center, which was built on landfill, consists of two large movie theaters, each with a 150-seat capacity, a projection room, museum, bookstore, information center, work room, office, boat crew lounge, small food and drink concession area, and restrooms. The central area of the Visitor Center is a large courtyard/fountain area with benches where visitors wait for assigned theater times. There is a 23-minute film presentation every 15 minutes. The film presentation in the theater is a requirement for admission on to the shuttle boats that transport visitors to the memorial site. Each shuttle boat has a capacity of about 160 passengers.

The Visitor Center structure covers more than 17,000 square feet. The entire site over which the NPS has been granted use rights consists of a one-acre visitor auto parking lot, (114 spaces), two unmarked parking areas for tour buses and overflow auto parking covering about three acres, and a little more than three acres of landscaped grounds and pedestrian walkways. The remainder consists of the Visitor Center building and an entrance roadway.

2.4 Mission and Goals of the Memorial

The mission of the NPS at the USS Arizona Memorial is to honor and commemorate those who gave their lives during the attack on Pearl Harbor on December 7, 1941. In furtherance of this mission, the NPS strives to achieve three purposes: To preserve and interpret the tangible historical resources associated with the attack; to interpret the historical events which led up to and resulted from the attack; and to preserve and interpret the intangible historical values, including the memories, attitudes and traditions of individuals with first-hand knowledge of the attack.

The pairing of the Missouri with the USS Arizona provides a historic link exhibiting the beginning and the end of World War II. In contrast to the USS Arizona, the Missouri strives to instill a sense of pride and honor from touring an exceptionally grand U.S. Navy battleship. The Missouri Memorial Association hopes to give visitors a positive, uplifting experience without taking away from the solemnity of the USS Arizona Memorial.

2.5 Visitation Levels and Visitor Profile

The USS Arizona Memorial site receives approximately 1.5 million visitors each year, or 4,500 people per day. Fiscal Year (FY) 1998 visitation to the USS Arizona Memorial was 1,366,499, which was down from the 1,412,484 visitors in FY 1997. The memorial site is open from 7:30 a.m. to 5:00 p.m. There is no admission charge, but all visitors must obtain

a ticket, given on a first-come basis. The tickets permit visitors to enter the theater at specific times. Waiting times of up to an hour for an assigned film showing are common during peak hours. Programs at the USS Arizona are conducted from 7:45 a.m. to 3:00 p.m. The average stay per visitor at the memorial site, including the Visitor Center, the boat ride, and the memorial, is approximately two hours. Visitation levels vary with the number of visitors to the island of Oahu, with the busiest month being July.

A typical visit to the USS Arizona Memorial site consists of a sequence of steps. First, visitors arrive and park in one of the lots provided for automobiles or the lot provided for tour buses, and walk to the entrance of the Visitor Center. Visitors then wait in line to obtain a free ticket for the documentary film about the attack. Tickets are issued for assigned times. During the wait for an assigned film time, some visitors choose to visit adjacent attractions, the USS Missouri Battleship and the USS Bowfin Submarine Museum and Park. Others view museum displays at the Visitor Center. Immediately after the film, a NPS Ranger guides visitors to the boat landing, where they board a Navy shuttle boat to the Memorial. All visitors disembark at the Memorial where they view the ship remains and the wall inscribed with the names of those killed in the attack. Time is allowed for visitors to take photographs and reflect on the event. At the end of the visit, the shuttle boats are then loaded again, and visitors are transported back to the Visitor Center. Upon their return to the Center, visitors are free to explore the museum and browse through the bookstore operated by the Arizona Memorial Museum Association.

Visitors frequently visit the nearby USS Battleship Missouri on the same day. Guided and unguided tours are available on the Missouri. A shuttle trolley takes visitors from the boarding area near the USS Arizona Memorial Visitor Center over the Ford Island bridge to the Missouri's pier. Tickets for the Missouri are purchased at the USS Bowfin Museum and Park. Average visitation for the USS Missouri is 1,200 people per day, but the ship could accommodate up to 2,000 people per day. Ninety percent of the battleship's visitors are walk-ins from the USS Arizona Memorial, and the rest typically are participants in a tour package. The average visitation time on the ship ranges from an hour and 15 minutes to two hours, depending on the type of tour.

The USS Bowfin Submarine Museum is also open for tours, in the form of a self-guided cassette tour. Ticket options for the Missouri and Bowfin are as follows:

- Missouri – General admission adult ticket: \$10; Guided tour adult: \$14;
- Bowfin – Cassette-tour adult: \$8.00; and
- Combined unguided Missouri/Bowfin adult ticket – \$14.

■ 3.0 Existing Conditions, Issues and Concerns

3.1 Transportation Conditions, Issues and Concerns

The USS Arizona Memorial Visitor Center is located on the shoreline overlooking Pearl Harbor directly off State Highway 99 (Kamehameha Highway). Free parking for about

150 cars is provided in lots adjacent to the center. There is also a parking lot for commercial tour buses, and an oval entrance drive to permit passenger drop-off closer to the center's entrance. The site has good roadway access, and parking facilities are adequate, although the existing developed lots may fill during peak times. Visitors typically spend about an hour and 15 minutes touring the site. Honolulu's transit agency, TheBus, runs several bus routes with stops near the USS Arizona Memorial site. However, none of the routes brings the bus into the oval driveway of the Memorial; passengers must cross the Kamehameha Highway. Public bus routes to the Memorial include routes 20, 47, 52, and 62. Also, TheBus has begun a new express route from Waikiki that will stop across the highway from the memorial, but the planned route does not include a turn into the Memorial drive to drop passengers. The NPS may attempt to negotiate for a stop closer to the memorial.

Figure 4.



In addition to the public bus system, private companies operate shuttle buses to the memorial from Waikiki hotels several times a day for about \$3.00 one-way. Many tour companies offer package tours including the USS Arizona Memorial, the USS Missouri Battleship and other sites.

Access is the main issue for the USS Missouri site at Ford Island. Currently, only active military ships are allowed in Pearl Harbor, and only active military personnel or those with DOD passes are allowed on the Naval Base and Ford Island. The one exception is visitors to the USS Missouri Battleship, which is moored to Navy property. By agreement with the Navy, visitors to the battleship are allowed provided they arrive in groups and do not travel individually. This agreement is implemented by the trolley shuttle bus system that transports visitors from the USS Bowfin Museum and Park to the USS Missouri. A few tour bus operators have also been given clearance to the USS Missouri. This tour bus traffic amounts to about two to three buses per day. It may be useful to evaluate all three of the existing Pearl Harbor sites together, looking at needs for travel between sites as well as transportation to and from Waikiki and Honolulu.

More sites are planned for the area, primarily on Ford Island (see Section V titled "Planning and Coordination.") If current plans are completed, there may be a sufficient number of visitor attractions on Ford Island to consider some form of a "Ford Island Tour"

separate from the USS Arizona, which will increase the need for some kind of transportation system for travel between the sites on the island. Also, if all of the future Ford Island attractions are packaged together, there would likely be increased tour bus activity. With the addition of these new attractions, saturation might become an issue. It is unclear what the maximum dollar amount is that visitors would be willing to pay for attractions in Pearl Harbor, and whether visitors would be choose to visit all of the planned and existing sites.

Current residents of Ford Island do not want to see more traffic from an increased number of trolleys or shuttles to the Ford Island sites traveling across the causeway to the island, and through the residential neighborhoods. The Missouri Battleship management is considering the use of shuttle boats to replace the trolleys. This change would coincide with the Battleship's move to a new pier, where lack of parking is a constraint.

The USS Arizona Memorial site has a fixed visitor capacity. It can accommodate 600 people per hour, with a two-hour stay, or 1,200 people at a time (plus an additional amount for visitors with excess waiting time.) Future growth in the level of visitation to the Pearl Harbor area will be from the USS Missouri Battleship, the USS Bowfin Museum and Park, and from other potential developments on Ford Island.

Access to the area is generally adequate, including good public transit access. Existing shuttles, such as boat shuttles to the USS Arizona and bus shuttles to the USS Missouri are good examples of the use of ATS for specialized needs. Boats provide the only access to the USS Arizona Memorial site, and buses are used to limit traffic and control visitor access on Ford Island.

The USS Arizona Memorial has an existing boat shuttle system operated by the Navy. The shuttle boat fleet of eight vessels is used for general transportation and special tours in Pearl Harbor as well as for ferrying visitors to the memorial site. The Navy provides two boats with crews daily during hours of operation for the USS Arizona shuttle boat service. The shuttle boat service runs every day during the year except New Years Day, Christmas Day, and Thanksgiving Day. A minimum of four boats are needed to serve visitors to the USS Arizona (two in operation, one in reserve, and one in maintenance or major overhaul). The fleet is nearing its design life and may need to be replaced. The cost of replacement boats is unknown, but estimates in the range of \$1 million per boat were suggested. Operating and maintenance costs are as follows: Fuel – \$41,536; Corrective maintenance – \$41,156; Preventive Maintenance – \$43,000; Commercial Overhauls – \$329,000. The NPS pays the Navy \$266,300 per year for the shuttle boat service. (All figures are for FY 1998 and include costs for parts and material only. Costs do not include labor for maintenance and repairs, or crew costs for the boats in operation.)

3.2 Community Development Conditions, Issues and Concerns

Plans are being developed for new housing on Ford Island. The new housing will bring additional traffic to the island, which could create a potential conflict with visitor uses, such as the Battleship Missouri Memorial.

There is some reluctance among members of the Navy and other branches of the military to pay the admission fees required at the USS Missouri and the USS Bowfin. Since the USS Arizona does not charge, it creates confusion as to why fees are charged at the other sites.

3.3 Natural or Cultural Resource Conditions, Issues and Concerns

In 1941, the Visitor Center site was underwater. The USS Arizona Memorial Visitor Center was built on landfill/spoil dredged from Pearl Harbor. According to the Statement for Management dated August 1983, the entire area has been modified to the extent that no natural resource values remain. However, the sunken ship is leaking an average of one gallon of oil a day. The oil leak is being monitored, and the Navy and the NPS are discussing possible mitigation or containment measures.

3.4 Recreation Conditions, Issues and Concerns

The overall visitor experience at the USS Arizona Memorial site is affected by the crowded conditions in the Visitor Center. The facility was designed for 750,000 visitors. Particular areas of congestion are the restrooms, the book store, the museum, and the parking lots outside the center.

A second condition that could affect the overall visitor experience is the high incidence of theft from vehicles parked in the Memorial site parking lots.

■ 4.0 Planning and Coordination

4.1 Unit Plans

A Draft Concept Plan for the expansion of the Visitor Center has been submitted to the public and government agencies for review, and should be finished in FY 1999. The Visitor Center was constructed on fill, and is experiencing some settling each year. Plans are underway for an expansion of the facilities that would not be tied to the existing structure.

Other plans for the Pearl Harbor area include:

- The relocation of the USS Missouri battleship to another site in the harbor about half-mile away from its current location in 2001;
- The addition of 600 to 1,000 new homes on Ford Island, planned by the Navy;

- The addition of a “Navy Square” development on Ford Island, planned by the Navy, which would be mix of uses, only some of which would be open to the public; and
- The addition of a new Pearl Harbor aviation museum to be located on Ford Island. Fundraising is underway for this project.

These proposed new developments are raising concerns in the community that the additional traffic from the developments could conflict with visitor uses and could result in undesirable levels of traffic on Ford Island, particularly with the addition of more visitor uses.

4.2 Public and Agency Coordination

There are several working partnerships that contribute to the operation of the USS Arizona Memorial site and the adjacent attractions. Planning is coordinated between the U.S. Navy, the Bowfin Submarine Museum, and the Missouri Memorial Museum Association. Two other groups that recently joined the planning partnership include the Pacific War Foundation and the Pearl Harbor Aviation Museum. These groups are currently working together on a concept plan for the Pearl Harbor visitor experience.

The provision of shuttle boat service between the USS Arizona Memorial site and the Visitor Center is covered by a memorandum of agreement between the Navy and the NPS dated October 23, 1980. Pursuant to this agreement, the Navy provides two boats with crews daily. The NPS pays \$266,300 annually for the maintenance and fuel for the shuttle boats. Most of the shuttle boats are eight to nine years old, with a life expectancy of five to 10 years.

■ 5.0 Assessment of Need

5.1 Magnitude of Need

The USS Arizona Memorial is well-served by public transportation, with several routes passing by the site. Site management has been working with the transit operator to bring buses off the highway and into the Memorial property so that visitors do not need to cross traffic to travel to and from the buses. The existing public transit system, plus access by many tour bus operators provides adequate access to the site for visitors who choose not to drive.

The demand for access to the area is increasing due to the recent location of the USS Battleship Missouri Memorial in the harbor. Access to the Missouri is provided by shuttle buses to the Ford Island docking location of the ship. Visitors to the USS Arizona, the USS Bowfin, and the USS Missouri all use parking lots near USS Arizona Memorial Visitor Center. A site plan is being prepared for the area to include additional parking and locations for tour buses.

The existing fleet of boats that bring visitors to and from the Memorial site in the harbor is nearing 10 years in age. The useful life of the boats is estimated at 10 years. Overhauls are conducted on a routine schedule, but as the boats age, continuing repairs can be expected to increase in cost.

5.1 Feasible Alternatives

Four boats are required to provide access to the USS Arizona Memorial. This number will not change in the future because the capacity of the memorial site is limited. The Navy maintains a larger fleet of boats because they are used for other transportation purposes throughout Pearl Harbor. The cost of replacement boats is uncertain. The existing boats do not provide adequate capacity for visitors with disabilities and boarding and disembarking times for people with mobility limitations can be overly long. It is estimated that replacement boats would cost at least \$1 million each.

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■ 7.0 Persons Interviewed

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LCDR Dale Esperum, Port Operations Officer, U.S. Navy-Naval Station Pearl Harbor. August 16, 1999